

## ABSTRACT

Glass can have a high thermal expansion coefficient when it is made up of  $\text{SiO}_2$ ,  $\text{B}_2\text{O}_3$ ,  $\text{Na}_2\text{O}$ ,  $\text{K}_2\text{O}$ ,  $\text{MgO}$  and  $\text{Al}_2\text{O}_3$ ; contains a partial crystal; and has a mean thermal expansion coefficient of  $125 \times 10^{-7} \text{K}^{-1}$  in a temperature range of  $50^\circ\text{C}$  to  $150^\circ\text{C}$ . Using this glass as a substrate for a multilayer film filter can fully reduce temperature fluctuations in the filter properties.